

Society Proceedings

NEW YORK NEUROLOGICAL SOCIETY

February 2, 1909

The President, DR. J. RAMSAY HUNT in the Chair

A CASE OF EPILEPTOID SEIZURES WITH PECULIAR AURA

By S. P. Goodhart, M.D.

The patient was a man, 36 years old, whose family and previous history were unimportant. In June, 1905, without any premonitory symptoms, and while quietly conversing, he suddenly felt a peculiar sensation in the calf of the left leg, as though the leg was swelling to such a degree that his shoe would burst open. He attempted to remove the shoe, but before he was able to do so he became unconscious. Upon recovering from this within a few minutes he had a mild general convulsive seizure and became violent. He was removed to a hospital, where, after six hours, he recovered consciousness suddenly and complained of lassitude and headache. After a few days he was able to return home, apparently well. Seventeen days later he had a second similar attack, with the same peculiar sensations in the left leg. Before losing consciousness, however, he was able to remove his artificial teeth and lie down, as he had been instructed to do. Upon lying down, the patient had the most disturbing sensations, as though the bed were rapidly revolving about him, and then as though he were being rapidly turned on a large iron horizontal bar. He likewise remembered that he heard shouting, and he knew that he was calling, but his voice seemed to emanate from another being within himself. The revolving sensations doubtless occurred while the patient was being restrained, just before consciousness was lost.

Following this attack there was some paresthesia over the calf of the affected leg, which persisted. About a year later he had a third attack, and on the following day a fourth one, and in both of these the same peculiar aura was present.

Since that time, Dr. Goodhart said, the patient had had no further attacks. Examination at the present time showed an area of almost complete anesthesia over the calf of the left leg, and there was a slight difference in the circumference of the two calves, that on the affected side being smaller. In reply to a question, Dr. Goodhart said he did not believe there was any actual swelling of the leg, as the patient had described it; it was simply a sensory manifestation.

Dr. B. Sachs, the retiring President, expressed his thanks to the members of the Society for the cordial support they had given him during his term of office. The excellence of the programmes, as well as the attendance gave proof that the fields of neurology and psychiatry had by no means been exhausted, and that there was still a large variety of sub-

jects open for discussion. In connection with the future course of the Society, he suggested that too much dependence should not be placed on the reading of stray papers, but rather that set topics should be determined upon for discussion, and that at least one or two meetings should be set apart for clinical purposes.

THE SENSORY SYSTEM OF THE FACIAL NERVE AND ITS SYMPTOMATOLOGY

By J. Ramsay Hunt, M.D.

The President-elect delivered an address, which embraced a general discussion of the sensory system of the facial nerve, *i. e.*, the geniculate ganglion and its central and peripheral divisions, its symptoms and syndromes.

(See this Journal, p. 321.)

HISTOLOGICAL STUDIES OF CASES OF GENERAL PARESIS OF LONG DURATION.

By Charles B. Dunlap, M.D.

The speaker presented a short report on this subject, based on four cases which varied in duration from eleven to twenty-three years. For the material and the clinical notes he acknowledged his indebtedness to the state hospitals mentioned below.

The first case (H. C.), of eleven years duration was received from the Rochester State Hospital. The patient, whose psychosis began at the age of thirty-eight, committed suicide by hanging in the eleventh year of his disorder. He went through an early period of bewilderment, followed by a maniacal condition; then lapsed into a quieter paranoic state in the fourth year, and somewhat later was very expansive. The data on which the diagnosis of general paralysis was made clinically were as follows: thick speech, tremor of the lips, unsteady writing with omission of letters, and exaggerated knee jerks; one convulsive episode; mental deterioration, with persistence in delusions about which he did not reason; inability to recall important facts in his life, such as the date of his marriage, his son's birth, etc.

The brain presented slight frontal atrophy, thickening of the pia and ependymal granulations. In the cortex moderate loss of parenchymatous elements, little neuroglia reaction, slight increase of blood vessels and a general very slight infiltration of the vessel sheaths with lymphoid and plasma cells, completed the anatomical picture and confirmed the clinical diagnosis.

In the second case (H. R.), from the Middletown State Homeopathic Hospital, also of about eleven years duration, tabetic symptoms accompanied the psychosis. Like the first case, sudden death, a result of choking on food, cut the disorder short. Syphilis was inferred from a genital scar. The onset was acute (age not stated) with great expansiveness, unequal and almost irresponsive pupils, and later, absent knee jerks. The progress was marked by bodily and mental deterioration for a while, and the occurrence of one parietic seizure and one fall with unconsciousness, but after three or four years the patient was stronger and there was little further change. The mental deterioration and the physical signs made the clinical diagnosis of general paralysis clear.

The brain in this case was considerably atrophied, the pia milky and partly opaque, and ependymal granulations were present; the same slight cortical changes described in the preceding case were found, but there was more reduction in thickness of cortex, as might be inferred from the atrophy. In the postero-median columns of the spinal cord there was diffuse thinning of fibers. The clinical and anatomical diagnoses were in full agreement.

The third case (H. L.), of fifteen or more years duration, was received from the Hudson River State Hospital. This patient had had a chancre. He was first admitted at the age of fifty-nine (no details available), and after the first two years of hospital life his psychosis improved and he returned home; he resumed his former occupation but was admitted again, in a confused, loquacious, tremulous condition, after being outside for five years. Confusion, dementia and general bodily weakness marked the further course, together with marked expansiveness; shortly before death, which occurred at the age of seventy-four, there was a temporary paralysis of the right arm and leg. The clinical diagnosis was general paralysis. Slight atrophy, diffuse grayness of the pia and a finely granular ependyma were the gross findings. The histological features were general infiltration of the pia with lymphoid and plasma cells, but only slight involvement of the cortical blood vessels, except in the temporal lobes and medulla oblongata, where the infiltration was of moderate intensity. There was some parenchymatous loss in the cortical layers. Certain pigmentary changes in the nerve cells and thickening of the blood vessels could be associated with the advanced age of the patient.

The last case (M. O.), from the Middletown State Homeopathic Hospital, was of 23 years duration. No mention was made of syphilis. The onset was sudden, at the age of thirty-seven, with an acute delirious condition, hallucinations, delusions and violence. This soon quieted down but left as physical signs: irresponsive pupils, drooping of one eye-lid, tremor of the lips, hesitation in speech and difficulty in pronouncing words. Mentally, there was great expansiveness, at a later period depression, then the expansiveness returned. Dementia was irregularly progressive, until finally the patient's mind became practically a blank. Various neurological incidents occurred in the first three years, such as left ptosis, left facial paralysis, right external strabismus and hemiplegias shifting from one side to the other with considerable rapidity. These are all believed to have been transient as they were mentioned but once in the record. Towards the last there was some rigidity and partial ankylosis of one arm with contraction of the fingers; only one convulsion was noted. The patient died at seventy and the clinical diagnosis was general paralysis. There was marked atrophy in the brain and much cerebro-spinal fluid. The pia was partially opaque and there were marked ependymal granulations. The blood vessels were atheromatous. Characteristic microscopic changes, although of very slight intensity, were found in all sections. There was little neuroglia activity, some increase of vascularity, but scanty infiltration.

The unusual features common to all these cases were long duration and very slight anatomical changes, especially as to vascular increase, infiltration, and slight neuroglia changes; but the essential differential features without which a diagnosis of general paralysis cannot at present be made histologically, were all confirmed; namely, various degrees of destruction of parenchymatous elements, together with so-called inflam-

matory processes in the vascular apparatus, not localized but diffused throughout the cortical and subcortical tissues, and consisting in an infiltration of the vessel sheaths with lymphoid and plasma cells; some increase of blood vessels, and some reaction on the part of the neuroglia. There was also an infiltration of the pia with the same kind of cells. These characteristics are sufficient to distinguish general paralysis from cerebral syphilis, and from the non-inflammatory conditions of senile dementia, arterio-sclerosis, and the psychoses of alcoholic origin. The loss of parenchymatous tissue in the above cases of long duration was diffuse and little noticeable except when brought in contrast with a normal cortex by means of photographs.

The discussion of these cases was supplemented by photographs and lantern slides which illustrated not only the types of long duration with slight changes, but also the ordinary types of general paralysis with abundant and easily recognized microscopic findings. In all the illustrations, where comparisons were to be made, the normal and the paralytic cortices were placed side by side.

GENERAL PARALYSIS OF AN UNUSUALLY LONG DURATION, WITH A REPORT OF TWO CASES, ONE WITH NECROPSY

By Morris J. Karpas, M.D.

The author stated it was generally recognized by various authorities that the life history of general paralysis approximated between two and five years. Cases in which the duration was eight years or over were considered atypical and exceptionally rare. In his own experience with general paralysis in the female, he found only two cases in which the duration of the disease was unusually long. One patient had suffered from paresis for the past twelve years, and at present enjoyed very good health: the other one was afflicted with the malady for eighteen years, and her death was due to the intercurrent of another disease. Dr. Karpas then reported in detail the history of these two cases. In the first case, the symptomatic picture from the psychological point of view presented many atypical features, which were: The apparently abrupt development, long period of excitement without fatal termination, peculiar behavior, persecutory-hallucinatory reaction, and, moreover, the present general mental dilapidation partook of many characteristics of dementia præcox. However, the striking somatic signs, associated with a very marked lymphocytosis and writing defect could only be explained on the grounds on a paretic process. Indeed, the diagnosis of general paralysis could not be questioned.

In the second case, the onset, the various mental phases of the disease picture and the well-defined physical signs were decidedly of a paretic reaction. It was interesting to note that the clinical phenomena of this case manifested the three well known forms of paresis, namely, anxious, grandiose and demented, each of which ran a peculiar course. It was worthy of emphasis that in the last case especially there were factors which doubtless were detrimental from a prognostic standpoint. Among these were (1) virulent syphilitic infection; (2) chronic alcoholism; (3) stress of life; (4) emotional upset; (5) early appearance of convulsions; (6) long standing dementia; (7) progress with remissions; (8) the form of paresis was cerebral. According to various observers and investigators,

general paralysis of the tabetic type had relatively a much better prognosis than that of the cerebral affection.

In spite of all these unfavorable conditions, this patient lived eighteen years, and the cause of death was precipitated by another disease. The question might be asked, how were we to explain this unusual longevity of such a grave disease in the presence of so many deleterious factors? While theoretically, many hypothetical assumptions could be advanced, nothing was more plausible and forcible than to accentuate the important fact that the constitutional coefficient played an important rôle in the production and modification of a psychosis, be it functional or organic.

A necropsy in this case was held an hour and a half after death. The calvarium was symmetrical, extremely thickened, and dense. The diploë was preserved, and on the inner surface of the frontal bones a few small exostoses were seen. The amount of cerebrospinal fluid was increased. The pia showed a moderate symmetrical haziness, which was most marked in the frontal and anterior Sylvian regions. Infiltration was well marked along the mesial surface of the hemispheres, and over the cerebellum. In the floor of the fourth ventricle slight irregularities but no well defined granulations were visible. The basal vessels showed a very slight degree of atheroma. The frontal and temporal tips were adherent. The brain as a whole was moderately atrophic, and its weight was 1,120 grams.

The histo-pathological changes were similar to those described by Dr. Dunlap, excepting in the sections of the first frontal, there was a diffuse glial hyperplasia of moderate intensity throughout the cortex, marked general endothelial proliferation, which led to multiple channel formation, and the prefrontal region showed more marked glial reaction, with considerable irregularity in the architectonics of the cortex, with distinct narrowing of it due to dropping out of nervous elements. The gyrus rectus showed the same lesions, with the glial hyperplasia and the endothelial changes paramount, but with well-marked dropping out of the nerve cells and reduction of the cortex in areas. The cornu Ammonis revealed typical changes of moderate severity, and the occurrence of particularly large spider cells was noted.

Dr. Sachs said the papers of Drs. Dunlap and Karpas were both extremely interesting and valuable. The first question that arose in his mind in connection with the cases of general paralysis of unusual duration was whether we were really correct in speaking of them as examples of this affection. Personally, he recalled one case of fifteen years duration, and in the course of the past twenty years he had seen a considerable number of cases that had lasted five or ten years. He had at present one case that had been under his constant observation for four years and another six years, and in both the diagnosis of general paralysis could be based on the usual grounds. The question was whether, after all, the name general paralysis could be regarded as a specific term, or whether we should include under it a number of different mental diseases? Probably some of these long-standing cases were really examples of cerebrospinal syphilis.

In one of the cases upon which some of the histological studies made by Dr. Dunlap had been based the patient was of such an advanced age that the question arose whether the findings should be accepted as those of classical general paralysis, and many of them would probably correspond very closely to those of advanced senile dementia. In other cases, the point that struck him was the marked lack of vascularity. In concluding, the speaker emphasized the thought that we should be a little

careful about classifying all these cases as general paralysis, and accepting the anatomical findings as a basis for that diagnosis.

Dr. Edward D. Fisher said that most of the cases reported by both Drs. Dunlap and Karpas seemed to him more or less atypical. Personally, he had seen a number of cases of general paralysis in which the question of diagnosis during life was rendered more or less difficult by symptoms that could be attributed to alcohol and syphilis. In some of these the obscure symptoms cleared up; in others they did not, and left the diagnosis in doubt. The microscopic findings of Dr. Dunlap were illustrative of degenerative conditions in the brain, and it would be interesting to compare them with the findings in old syphilitic cases associated with progressive dementia. The speaker recalled the statement of Dr. Adolf Meyer that during the end stages of many of these conditions the pathological findings were so similar that they could not be differentiated, and the question arose whether we could base our diagnosis on the pathological findings in long-standing cases of general paralysis.

Dr. B. Onuf said that a comparative study of the histological findings in cases of chronic alcoholism, pseudo-paresis and typical general paralysis would be both interesting and instructive. It appeared from Dr. Dunlap's paper that the actual histological findings in cases of long-standing general paralysis, aside from those of atrophy, were meager, and the outlook of finding some special characteristics of general paralysis from a pathological standpoint did not seem very encouraging. Clinically, it was sometimes extremely difficult to distinguish between cases of alcoholism, pseudo-paresis and general paralysis, and the same was true of certain cases of syphilis and general paralysis, it would be very instructive if Dr. Dunlap informed us whether the pathologic-anatomical changes underlying these conditions gave after all some definite differential diagnostic clues and in what these consisted.

Dr. Hunt referred to the changes that were found in the cortex in some cases of locomotor ataxia. They were apparently analogous to those observed in dementia paralytica, yet they gave no signs clinically.

Dr. Dunlap, in closing, replied to Dr. Sachs's query as to whether these cases could rightly be regarded as examples of general paralysis from a clinical standpoint, by saying that he was not speaking from that standpoint; the clinical diagnosis, however, in all of these cases, was that of general paralysis. Clinically, it was sometimes very difficult to make the diagnosis between general paralysis, chronic alcoholism, senile, arteriosclerotic and syphilitic conditions. Anatomically the task was simpler and the essential grounds on which the diagnosis of general paralysis was based were the presence of a diffuse infiltration of the vessel sheaths with lymphoid and plasma cells, and degeneration of the cortical elements. In cases of brain syphilis this diffuse infiltration with lymphoid and plasma cells was not found, and there was no difficulty in differentiating the gummatous forms of cerebral syphilis from general paralysis. In the meningeal forms of cerebral syphilis the differentiation became somewhat more difficult, but was by no means impossible; here the meningitis was the factor upon which most stress was laid, and the inflammatory process, if it invaded the cortex at all, did so as a result of direct extension from the meninges, while in general paralysis no such relation was present, but the process was diffuse and the cortex might be extensively affected, while the meninges showed little change; in other words, there was no relation between the two. In senile or alcoholic cases the absence of an

inflammatory condition, as shown by the absence of lymphoid and plasma cells in the vessel sheaths was again the differential point. In these cases of general paralysis of long duration this infiltration of the vessel sheaths with lymphoid and plasma cells, though slight, was perfectly characteristic and confirmed the clinical diagnosis. The speaker said that personally he had not seen the statement attributed to Dr. Adolf Meyer that in the end-stages of certain of these mental conditions the pathological findings were of little or no differential value, and that he could not reconcile this statement with Dr. Meyer's standpoint as he understood it. In reply to Dr. Hunt, he said that he had no opportunity of making histological studies in the brains of cases of pure locomotor ataxia, but only in those cases which had a mental disorder in addition to the ataxia, and, therefore, he could not say whether the changes in the brains of tabetics were analogous to those observed in dementia paralytica; in several of the tabetic cases, however, which had mental disorders, the characteristic changes of general paralysis were not present.

THE PHILADELPHIA NEUROLOGICAL SOCIETY

January 22, 1909

The President, DR. J. W. McCONNELL, in the Chair

A CASE OF PROBABLE OCCLUSION OF THE POSTERIOR INFERIOR CEREBELLAR ARTERY

By Horace Carncross, M.D.

F. R., 42 years of age, was utterly unable to speak, had difficulty in swallowing and some slight dribbling of saliva. His understanding was normal and he communicated by writing. There was a paralysis of the interarytenoid muscle, which left a triangular chink at the posterior commissure upon approximation of the weak vocal cords, and there was paralysis of the left palate and uvula, although the arch moved very slightly on the left side upon attempting to say "a." There were no other objective symptoms with the exception of an inability to stand well on the left foot alone, and a Babinski reflex on the left. These symptoms came on suddenly without loss of consciousness about 15 years ago, at which time there was the greatest difficulty in swallowing (fluids returning through the nose) and excessive dribbling of saliva. There was also weakness in the left leg. At present there is no disturbance of sensation. He was very emotional and for the past six years has had epilepsy. The convulsions are general and occur once or twice a month. There is a fairly satisfactory history of syphilis previous to his "stroke" 15 years ago. The present symptoms point to a lesion involving the nucleus ambiguus from which the motor fibers arise to supply the larynx and pharynx. The sudden onset of the pharyngeal and laryngeal paralysis following a syphilitic infection, and unaccompanied by loss of consciousness and either facial or other paralysis (except a slight weakness of the left leg) point to an occlusion of the right posterior inferior cerebellar artery as the most probable cause. There may have been crossed sensory disturbances at the time of onset but this could not be determined. There is at present no weakness in the left leg; knee jerks are very slightly increased.